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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,796

12/08/2003

Kia Silverbrook

ZE005US

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09/08/2004

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER

DO, AN H

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/728,796	Applicant(s) SILVERBROOK ET AL.	
	Examiner An H. Do	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/112,806.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/112,806, filed on 10 July 1998.

Specification

2. The disclosure is objected to because of the following informalities: incomplete phase in specification on page 1 line 1 after "November 23, 2002" should include the following:

" , now U.S. Patent No. 6,672,708, which is a Continuation of 09/855,093 filed 05/14/2001, now U.S. Patent No. 6,505,912, which is Continuation of 09/112,806 filed 07/10/1998, now U.S. Patent No. 6,247,790."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Khuri-Yakub et al (US 5,828,394).

Khuri-Yakub et al disclose the following claimed limitations:

Regarding claim 1, an inkjet printhead chip (Figures 1-3, a fluid drop ejector) that comprises a substrate (11, 12) that defines a plurality of ink supply channels (16, column 2, lines 51-53); a drive circuitry layer (conductive contact films 18, 19) that is positioned on the substrate (11, 12); and a plurality of nozzle arrangements (Figures 1-3) that are positioned on the substrate (11, 12), each nozzle arrangement including a nozzle chamber (reservoir 14) defined by the substrate (11); a roof structure (elements 13 and 17-19) positioned over the nozzle chamber (reservoir 14), the roof structure (elements 13 and 17-19) defining an ink ejection port (Figure 2, the centered orifice); and at least one actuator (piezoelectric annular disk 17) that is positioned in the roof structure and is displaceable with respect to the substrate (11, 12) on receipt of an electrical current (Figures 4A-6C) from the drive circuitry layer (conductive contact films 18, 19) to reduce a volume of the nozzle chamber (14) so that ink is ejected from the ink ejection port (Figure 7C).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khuri-Yakub et al (US 5,828,394) in view of Asaba (US 5,850,242).

Khuri-Yakub et al disclose the claimed invention except for the limitation of in which the drive circuitry layer is a CMOS layer.

Asaba teaches in Figure 17 the drive circuitry layer is a CMOS layer (column 1, lines 60-66), for the purpose of supplying a signal for drivingly controlling one transistor at a desired timing (column 4, lines 36-38).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the actuators actuated by means of a thermal actuator device, as taught by Asaba into Khuri-Yakub et al, for the purpose of supplying a signal for drivingly controlling one transistor at a desired timing (column 4, lines 36-38).

Allowable Subject Matter

7. Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 2-6 is the inclusion of the limitation of an inkjet printhead chip that includes a plurality of nozzle arrangements, each nozzle arrangement having a number of actuators positioned in each roof structure about the ink ejection port. It is this limitation found in the claims, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inui et al (US 5,719,604) disclose a thermal inkjet printhead having a buckling body including a heater layer buckled when a current is applied. Karita et al (US 6,151,049) disclose a liquid discharge head having a flow path including a bubble-generating region in which bubbles are generated, a movable member having a free end on the side of the discharge opening.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AD
September 1, 2004

K 7/11 - 9/04
Primary Exa.